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In re Hallman

(CCPA)
210 USPQ 609

Decided July 16, 1981
No. 81-524
U.S. Court of Customs and Patent Appeals

Headnotes

PATENTS

1. Claims -- Functional -- In general (§ 20.451)
There is nothing intrinsically wrong in defining something by what it does rather than by what it is.

2. Claims -- Article defined by process of manufacture (§ 20.15)
Product claims may be drafted to include process steps to wholly or partially define claimed product; to extent that process limitations distinguish products over prior art, they must be given same consideration as traditional product characteristics.

3. Claims -- Functional -- In general (§ 20.451)

Patentability -- Anticipation -- Patents -- In general (§ 51.2211)
Rejection under 35 U.S.C. 102 and 103 of claims of applicant who failed to demonstrate that functional characteristics of his claimed invention are not inherent in structure disclosed by prior art patent is affirmed.

4. Disclaimer -- In general (§ 32.1)

Double patenting -- In general (§ 33.1)

Double patenting -- Tests of (§ 33.9)
35 U.S.C. 101 precludes issuance of two patents claiming same invention; "same

invention" means identical subject matter; good test is whether claim to one invention could be literally infringed without literally infringing claim to other; where application claim and patent claim cross read, 35 U.S.C. 101 forbids grant of second patent, even in presence of terminal disclaimer.

Particular patents -- Image producer

Hallman, Structure for Producing Images, rejection of claims 1-6, 8, 11, 14-16, 19, and 20 affirmed and rejection of claims 7, 10, and 13 reversed.

Case History and Disposition:

Appeal from Patent and Trademark Office Board of Appeals.

Application for patent of Robert W. Hallman, Serial No. 350,372. From decision rejecting claims 1-8, 10, 11, 13-16, 19, and 20, applicant appeals. Modified.

Attorneys:

Harry V. Strampel, Chicago, Ill., and Sidney W. Russell, Arlington, Va., for appellant.

Joseph F. Nakamura and Fred W. Sherling for Patent and Trademark Office.

Judge:

Before Markey, Chief Judge, and Rich, Baldwin, Miller, and Nies, Associate Judges.

Opinion Text

Opinion By:

Markey, Chief Judge.

Appeal from the decision of the Patent and Trademark Office Board of Appeals ("board") sustaining the Examiner's rejection of claims 1-8, 10, 11, 13-16, 19 and 20. We affirm in part and reverse in part.

Background

The Invention

The claimed invention is directed to a structure for producing images. [1] It is useful in the fabrication of microforms, such as microfilms, lithographic printing plates, and litho

films. The structure comprises a layer of image forming material applied to a substrate and a layer of energy sensitive material overlying the image forming layer.

The energy sensitive material is changeable from one to another state when exposed to an energy source. In one state, the material is readily soluble with respect to a given solvent. In the other state, the same material is substantially insoluble in the same solvent. Suitable energy sensitive materials include diazo compounds and oquinone diazides.

The image forming layer may be of metallic, semi-metallic, organic, or inorganic materials having image forming properties and capable of being easily or readily dissolved in the same solvent as the energy sensitive material.

The substrates most commonly used in making the invention are flexible plastic films, preferably transparent or translucent.

The feature of the claimed invention alleged to provide patentable distinction over the prior art is that the layer of energy sensitive material and the layer of image forming material are of a thickness and a character such that, upon exposure of the structure to an energy source, the soluble energy sensitive and image forming materials can be essentially simultaneously dissolved, in substantially less than one minute, with a single solvent to provide the imaged product. [2]

The Rejections

Claims 1-6, 8, 11, 14-16, 19 and 20 were twice rejected under 35 USC 102 and 103 in view of the Colom et al. U.S. Patent No. 3,639,185 (Colom), and in view of Neugebauer et al. U.S. Patent No. 3,201,239 (Neugebauer). All claims at issue stand rejected under 35 USC 101 for double patenting in view of Hallman's U.S. Patent No. 4,113,494. Claims 9, 12, 17 and 18 have been withdrawn from consideration.

The References

Both Colom and Neugebauer disclose image forming structures including energy sensitive and image forming layers applied to a substrate.

Colom is more particularly directed to the use of etchants in the fabrication of microelectronic semiconductor devices and integrated circuits. The image forming layer of Colom may be molybdenum or chromium. There is no suggestion to use a semi-metal such as tellurium. The energy sensitive layer of Colom is a diazide type of resin or resin containing material. After photo exposure, both the exposed portion of the energy sensitive layer and the underlying image forming material may be removed through the use of a single solvent to form a mask structure. The non-exposed portion may also be removed with the use of an additional solvent, although the board found that such removal is not essential.

Neugebauer relates to etchants useful in the preparation of printing plates for planographic and offset printing, and printed circuits. The Neugebauer structure also includes a light sensitive layer and an image forming layer applied to a substrate. The reference is distinguishable from the present invention in that it discloses a two-stage development process, that is, a process wherein the light sensitive coating is first removed with one solvent, and the exposed image forming layer is then removed in a

second, separate step, using a different solvent.

Board

The board affirmed the examiner's rejection of claims 1-6, 8, 11, 14-16, 19 and 20 under 35 USC 102 and 103. It rejected Hallman's attempt to patentably distinguish his invention from the references based upon the functional language in his claims.

In its opinion, the board characterized Hallman's principal inventive concept as the use of materials soluble, on subjection to energy, in the same solvent. The board concluded that once that concept was understood, the particular materials and thickness of the layers and the necessary type of energy would be apparent. In comparing the functions of Hallman's structure with those of the references, the board determined that Colom, like the present invention, did not require the complete removal of the energy sensitive layer after etching. The board also concluded that, because the claims are drawn to an article, any possible distinctions in the manner in which it is ultimately used cannot warrant allowance of the appealed claims. The functional language of Hallman's article claims was deemed insufficient to distinguish over Neugebauer, the board noting that Neugebauer's structure may be treated with a common solvent.

The board affirmed the double patenting rejection under 35 USC 101. Though the patent claims refer to first and second solvents, the board noted that the first is employed only to apply the energy sensitive layer and the second was employed to remove both the exposed energy sensitive layer and the underlying image forming layer. The recitation of two solvents in the patent claims was therefore deemed insufficient to distinguish the presently claimed structure.

Opinion

Rejections Under Sections 102 and 103

[1] It is well settled that there is nothing intrinsically wrong in defining something by what it does rather than by what it is. In re Echerd, 471 F.2d 632, 176 USPQ 321 (CCPA 1973); In re Swinehart, 58 CCPA 1027, 439 F.2d 210, 169 USPQ 226 (1971); In re Fuetterer, 50 CCPA 1453, 319 F.2d 259, 138 USPQ 217 (1963).

[2] Product claims may be drafted to include process steps to wholly or partially define the claimed product. In re Luck, 476 F.2d 650, 177 USPQ 523 (CCPA 1973). To the extent that the process limitations distinguish the *products* over the prior art, they must be given the same consideration as traditional product characteristics. Id, at 525.

Hallman has set forth his invention in broad functional terms. It was the examiner's view that the recited functional characteristics were disclosed or suggested by the references. Twice the examiner noted that the claimed functional characteristics and intended processing parameters do not define patentably distinct subject matter. In respect to this challenge by the examiner, Hallman has failed to show that the reference structures, particularly that disclosed in Colom, were not inherently capable of functioning as the presently claimed invention. In re Ludtke, 58 CCPA 1159, 441 F.2d 660, 169 USPQ 563 (1971).

In comparison with the claimed invention, the Colom reference discloses the use of

molybdenum for the image forming layer, and a quinone diazide and novolak resin mixture for the energy sensitive layer. Colom also teaches layers of materials having the thickness claimed by Hallman. Moreover, Colom discloses a sodium chlorite solvent that falls within the claims of Hallman.

We agree with the conclusion of the board that Colom discloses the use of a single solvent to remove both the photosensitive and image producing layers. We further agree that the speed of solution will depend upon the techniques used for developing the latent image produced in the claimed article.

[3] Because Hallman has failed to demonstrate that the functional characteristics of his claimed invention are not inherent in the structure disclosed by Colom, we affirm the rejection of the claims under 35 USC 102 and 103.

Double Patenting Rejection

All claims stand rejected under 35 USC 101, for failure to patentably distinguish the claimed invention from the invention recited in Hallman's U.S. Patent No. 4,113,494. Because we have affirmed rejections of the other claims under 35 USC 102 and 103, our review of this same-invention type double-patenting rejection under 35 USC 101 is limited to claims 7, 10 and 13.

In affirming the double-patenting rejection, the board relied primarily on patent claim 14 which reads;

> 14. An imaging material comprising a layer comprising a thin film of an energy sensitive material which is capable of changing upon the application of energy between two states, one of which is a state in which the material is soluble in a first solvent, the other being a state in which the material is not soluble in said first solvent; and a layer comprising as an image forming material a thin film of an opaque tellurium composition which comprises from about 50 atomic percent to 100 atomic percent tellurium and which is soluble in a second solvent, but not soluble in said first solvent, the film of energy sensitive material and the film of the tellurium composition and the thinnesses thereof being such that the change in state of the energy sensitive material upon the application of energy thereto and dissolution by said second solvent of the tellurium composition in the areas where the energy sensitive material has not undergone a change in state, can, together, take place in substantially less than 1 minute to provide an imaged product.

Patent claim 14 differs from claims 7, 10 and 13 in its omission of a substrate, the specific energy sensitive material and solvent, and use of both a first and second solvent. Hallman relies on his presently claimed use of a single solvent.

[4] 35 USC 101 precludes issuance of two patents claiming the same invention. See, e.g., In re Boylan, 55 CCPA 1041, 392 F.2d 1017, 157 USPQ 370 (1968). "Same inven

tion" means identical subject matter. In re Vogel, 57 CCPA 920, 422 F.2d 438, 164 USPQ 619 (1970). A good test is whether a claim to one invention could be literally infringed without literally infringing a claim to the other. In re Eckel, 55 CCPA 1068, 393 F.2d 848, 157 USPQ 415 (1968). Where the claim in the application and the patent claim cross read, 35 USC 101 forbids the grant of the second patent, even in the presence

of a terminal disclaimer. In re Vogel, supra.

In sustaining the examiner's rejection under 35 USC 101 the board concluded that Hallman's present claims and those in his patent are directed to the "same invention". We do not agree. In view of the differences set forth above, the present claims do not literally cross read on the patent claims.

Accordingly, we affirm the rejection under 35 USC 102 and 103 of claims 1-6, 8, 11, 14-16, 19 and 20, and reverse the rejection under 35 USC 101 of claims 7, 10 and 13. See In re Zickendraht, 50 CCPA 1529, 329 F.2d 225, 138 USPQ 22 (1963) (concurring opinion by Rich, J.); Gholz, The Law of Double Patenting in the CCPA, 4 APLA Q.J. 261, 273 (1976). We note in passing that the examiner has not made a rejection of the claims for obviousness-type double patenting and that Hallman has not filed a terminal disclaimer to avoid such a rejection.

Modified.

Footnotes

Footnote 1. Claim 1, which contains all the material limitations of the claims rejected under 35 USC 102 and 103 reads:

> 1. A structure for producing images comprising a substrate, thin film of a metallic or metallic-like image forming material on a surface of the substrate, said image forming material being characterized in that it is opaque and is easily soluble in a solvent consisting essentially of a dilute aqueous solution of an alkali metal hypochlorite, and a thin film of an energy sensitive material on the film of image forming material, said energy sensitive material being characterized in that it is capable upon the application of energy of changing between two states, one of which is a state in which the energy sensitive material is substantially soluble or permeable with respect to the aforementioned solvent in which the image forming material is easily soluble and the other being a state in which the energy sensitive material is substantially insoluble or impermeable with respect to said solvent the film of energy sensitive material and the film of image forming material and the thinnesses thereof being such that the change in the state of the energy sensitive material upon the application of energy thereto and the essentially simultaneous dissolution in said solvent of both the energy sensitive material in those areas where it is in a substantially soluble or permeable state and the image forming material underlying said areas, can together, take place in substantially less than one minute to provide an image product.

Hallman makes no separate claim to patentability based upon any of the further limitations in his other independent or dependent claims.

Footnote 2. The examples given in the specification describe production techniques wherein the layer of energy sensitive material and the layer of image forming material were both simultaneously dissolved in times varying from less than one second to five seconds.

- End of Case -

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